plan, it appeared that the less their elevation, the better was their effect; that their proportion should be rather that of the single or double Gloucester, than of the Stilton cheese. This was proved by the proportions of the Pantheon, and the Castle of St. Angelo.

In treating of the spiral line—the offspring of the circle—the lecturer adverted to the beauty of the fossil relic known as the *Cornua Ammonis*, which, if it had been a work of art, discovered amongst the ruins of Greece or Nineveh, would have been the theme of general admiration, but, as a natural production, was altogether disregarded. Again, adverting to the graceful lines derived from the conic sections, he referred to the statement of Tacitus, that the goddess Venus was worshipped in Cyprus, under the form of the cone said to have fallen from Olympus,—as if the worshippers of beauty had recognised its principal element in that form.

The next point to be considered was the combination of rectilinear and curvilinear lines, both in the plans of buildings and in their mouldings. This combination was not adopted either by the Greeks or the Egyptians, but it was conspicuous in the plans of Roman buildings, as might be seen in several basilicas, in the temple of Mars Ultor, and in the palace of Augustus, as restored by Canina. The same principle, applied to external architecture, was carried to a great extent by Borromini and Bernini, and by it much grace of composition, with a great variety of light and shade, were attained. In its general application to exterior elevations this combination was a modern innovation; but it constituted the soul of beauty in the composition and contour of Greek mouldings. Hogarth's "line of beauty" was identical with the profile of the Greek cymatium: and the great charm of other antique mouldings was derived from the tasteful opposition and combination of the round, the angular, and the square.

Mr. Cockerell illustrated the grace and delicacy of the great mouldings by referring to some well-executed casts; and proceeded to contrast them with the coarseness and rudeness of those of the Romans. The angularity and acuteness of the latter, with their vulgar energy, as compared with the Grecian specimens, were forcibly elucidated. The Romans, he observed, concealed their want of art by an abundance of ornament. This was manifested in the arch of Septimus Severus; which justified the assertion of Tacitus, that from the time of that emperor the art of architecture had lost its majesty. The still further degeneration of art subsequently was shewn by reference to the mouldings of the Palace of Diocletian, at Spalatro; and the lecturer urged upon the attention of the students the opinions so well expressed on Greek and Roman mouldings, in Wood's "Letters of an Architect." He further illustrated the subject and its analogy with natural forms, by diagrams of the human profile; shewing that the existence therein of outlines similar to those of the best Grecian mouldings, conveyed a highly intellectual expression of countenance; whereas their absence produced only an ugly and sensual expression.

It was necessary to guard the students against the seductions of archæology; whereby they were too likely to be led to admire and imitate the deteriorated productions of the Lower Empire. It was proved by history that architecture and public morals declined simultaneously. Indeed it would be obvious to any philosophic student, by comparing the history of the age of Augustus with that of Justinian, that the architectural works of the former period must of necessity be elevated, and those of the latter debased. In this respect the architect might be regarded as himself the historian of his times. Obvious as this truth was, it was necessary to guard the student against the meretricious graces of Spalatro, Baalbec, and Palmyra, and the Byzantine works described by D'Agincourt. These, though worthy of careful study, should be subjected by the student to severe and rigid criticism. In common with all kinds of inferior productions, these works had been repeatedly engraved of late years; and in fact few ancient edifices had not been so illustrated; every author and publisher being an enthusiast in reference to his own works. Great care, therefore, was necessary to distinguish the corn from the chaff, and it was much to be desired that an age of sound and judicious criticism should follow the present era of immense production.

Having pointed out the skill and taste which the Greeks displayed in adapting the superficial ornamentation of their mouldings to the forms of these members, and the neglect of such matters of detail by the Romans, the lecturer proceeded to notice the three Grecian orders, premising that architectural practice in England must be limited to Greek, Roman, and Gothic architecture, excluding, as impracticable here, the Egyptian, Assyrian, and other ancient forms.

The Doric order, he observed, had never yet had a fair chance in England. It was difficult to associate its horizontal lines successfully with the general surface of the country; and only in such situations as Edinburgh and other elevated spots could it be properly employed. Vitruvius had overlooked one important feature of the Doric order, namely, the steps forming its stylobate. These, in the best classic examples, were of considerable height; the actual ascent to the temple being by lower and subsidiary steps. To place a Greek column, therefore, on a 6-inch step, was a gross solecism. In the main steps, likewise, the Greeks introduced a sinking in each riser, so as to form a nosing, which gave its due effect of shade to every step: and but for this expedient the steps would have presented the appearance of an unbroken mass of light when the sun shone full upon them. The great size of the stones employed was another main feature of the ancient Doric, as shown in the ruins of Pœstum, Selinus, Corinth, &c. In modern imitations, therefore, the column should, if possible, always be a monolith, and the architrave in single stones.

The difference between the Ionic of Ionia and that of Greece Proper, with the superior beauty of the former, was next explained, together with the leading features of the Corinthian order. In conclusion, the Professor observed that, whilst admiring these beautiful examples of masonic architecture, on which all their associations of the beautiful were founded, it was essential that they should not overlook the new element, the Iron order, which science had lately brought into notice. The student would do well to turn his attention to the means of imparting, by analogy with nature, that beauty which it was capable of receiving, to the Iron order, on which he hoped to offer some remarks on a future occasion.

## THE RIVER TERRACES FOR LONDON.

ALTHOUGH the grand scheme for forming continuous lines of terrace along the Middlesex *strand* of the Thames—say, between Vauxhall-bridge and London-bridge,—which has so long engaged the attention of John Martin and the public, bears little promise of being carried into effect, seeing the multitude of interests that are involved, and the great cost that would attend the carrying out an undertaking of such magnitude, it does not follow, all the while, that portions, such as offered as the most eligible, should not be effected from time to time. Now, if there is one portion more than another which could be executed with facility, and would be attended with advantages to those most immediately interested, far more than commensurate to the expenditure, it is that lying between Adelphi-terrace and the north end of Waterloo-bridge. Here, the line of direction is free of main buildings; and the relative levels of the shore, terrace, and bridge, are such, that the low-lying premises on the first would be cleared by a terrace carried over them. The circumstances at this place are such as suggest a mode of construction in which cast-iron would obviously play a prominent part,—columns—arch-girders—binders—joists, and a platform of Rockhill (*i. e.* Caithness) or Valentia flags, not omitting semitransparent but substantial flags of glass: such platforms can now with ease be made waterproof by a system of skeleton framing, affording solid bearings to every joint, these packed with elastic material saturated with red or white lead, and the flags flush-screwed. Such an opening next the river becomes very desirable in connection with the improvements at the west side of Somerset House-buildings; while it would be no inconsiderable convenience, so far as the westward approach to, or egress from, Waterloo-bridge is concerned. To the proprietors, also, of the aforesaid low-lying premises on the shore that would be spanned over, improved communication with the Strand and Waterloo-bridge level would become available, by means of open, spiral, or other stairs opening on the terrace; and, generally, an enhancement in value of the properties in contact with it might be anticipated. We throw out the hint to those whom it may concern, and shall be glad to find the seed germinate.

## IRELAND AND HER BOGS, AND HOW TO USE THEM.

IT is a gratifying and singular fact that the districts of the sister kingdom which are at present considered as the most worthless seem ordained to be, at a not very distant period, a mine of wealth to their fortunate proprietors. Unlike mines in general, too, we find here the object of our wish may be wrung from mother-earth by labourers rejoicing in the genial sunshine, and invigorated by the nature of their toil.

The actual extent of bog-land reclaimable in Ireland alone amounts to [illegible] acres. And as the weary traveller surveys on every side, as far as the eye can reach, the dull brown tints which indicate the nature of these wildernesses, the idea must naturally suggest itself to his mind that it is a truth that nothing is devoid of purpose if we can but discover its applicability: and it appears we are now upon the eve of being assured that the dreary bogs, in which vegetation seems so long to have slumbered, are to become the sources of abundant and general reproduction. In more than one part of this hitherto much neglected country may be observed the manufactories for converting the peat or turf into charcoal, the virtue of which, whether as a deodorant, a medium of rapid filtration, a fuel, a vehicle for transforming the contents of sewers and cesspools into a most valuable and inoffensive manure, cannot be overrated, and to be duly appreciated must be seen in operation. It is true that various demonstrations of the uses of this material have been made, and numerous publications issued on the subject, and yet we find the general public either totally ignorant of its merits, or sceptical on the subject of its vast importance to society. Foremost amongst the depôts for the manufacture of this article in Ireland we find the extensive stations of the Irish Amelioration Society, in Kildare, providing employment, at remunerative wages, to a vast number of the wilding peasantry, who are giving daily proof that it is labour alone the Irish seek, and not alms. We have also the works of Messrs. Gwynne and Hayes, in the county Kerry, who have commenced trade largely in drying and compressing peat for fuel, for home use and for exportation, as it is considered far preferable to coal for steam-boilers, engines, &c. There are also many private manufacturers in different parts of the country, giving much occupation to the poor people, who are always grateful for being afforded the means of self-support, as their employers invariably testify.

We have heard repeatedly of the practicability of extracting spermaceti, naphtha, tar, &c. from this humble Cinderella of the great organic family, and that such may be done at a cost to amply repay parties who judiciously employ their capital in producing the same we have no reason to doubt.

In a recent experiment, made in the presence of two professional friends, I had the satisfaction of finding that the gas produced from the compressed peat burnt freely a considerable time with a clear steady flame, in every way similar to the carburetted hydrogen, or common coal gas, but evidently more brilliant, probably owing to the absence of sulphur in the peat, while it abounds so largely in the